

## REMARKS

### Introductory Comments:

Claims 1-63 were examined in the Office Action under reply and stand variously rejected under (1) 35 U.S.C. §112, second paragraph (claim 55); (2) 35 U.S.C. §102(b) (claims 1, 5-7, 10, 11, 14-16, 27, 37-46, 53-56 and 59-62); and (3) 35 U.S.C. §103(a) (claims 2-4, 8, 9, 12, 13, 17-26, 28-36, 47-52, 57, 58 and 63). Claims 10-13 were objected to under 37 CFR 1.75(c). These rejections and objections are believed to be overcome for reasons discussed below.

### Overview of the Above Amendments:

Claims 2, 5, 6, 10-13, 19-26 and 37-63 have been cancelled.

Claims 1, 3 and 28 have been amended to recite the subject invention with greater particularity. Specifically, claim 1 incorporates the recitations from cancelled claim 21 and now specifies that the probe polynucleotide is "attached to a microsphere that comprises a spectral code comprising a first fluorophore, wherein the first fluorophore is a semiconductor nanocrystal having first fluorescence characteristics." Claim 3 has been amended to depend from claim 1 rather than cancelled claim 2 and claim 28 has been amended to track the language of claim 1. Support for the above amendments can be found in claims 19-21, as filed and throughout the specification.

The foregoing amendments are made without prejudice, without intent to abandon any originally claimed subject matter, and without intent to acquiesce in any rejection of record. Applicants reserve the right to bring the canceled claims again in a related application.

### Rejection Under 35 U.S.C. §112, Second Paragraph:

Claim 55 was rejected under 35 U.S.C. §112, second paragraph as indefinite. Without conceding the merits of this rejection, claim 55 has been cancelled in order to hasten allowance. Thus, this basis for rejection no longer applies. Withdrawal thereof is respectfully requested.

Objection Under 37 CFR 1.75(c):

Claims 10-13 were objected under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claims 10-13 have been cancelled solely in an effort to advance prosecution. Accordingly, this objection is moot.

Rejections Over the Art:

Claims 1, 5-7, 10, 11, 14-16, 27, 37-46, 53-56 and 59-62 were rejected under 35 U.S.C. §102 (b) as anticipated by GB 2,312,747 to Whitcombe ("Whitcombe") and under 35 U.S.C. §102(c) as anticipated by U.S. Patent No. 6,316,200 to Nadeau et al. ("Nadeau"). Applicants note that claim 21 was not subject to these rejections. The substance of claim 21 has now been incorporated into claim 1 and all pending claims either directly or ultimately depend from claim 1. Thus, these bases for rejection no longer apply. Withdrawal of the rejections under 35 U.S.C. §102 is therefore respectfully solicited.

Claims 8, 9, 12, 13, 17-20, 22-26, 28-36, 47-52, 57, 58 and 63 were rejected under 35 U.S.C. §103(a) as unpatentable over either of Whitcombe or Nadeau. Additionally, claims 2-4 were rejected under 35 U.S.C. §103(a) as unpatentable over either of Whitcombe or Nadeau, in view of U.S. Patent No. 6,207,392 to Weiss et al. ("Weiss"). As explained above, the recitations from claim 21, which claim was not subject to the above rejections, have been added to claim 1. Thus, these rejections are moot and withdrawal thereof is respectfully requested.

Claim 21 was rejected under 35 U.S.C. §103(a) as unpatentable over either of Whitcombe or Nadeau, in view of Weiss, and further in view of U.S. Patent Publ. No. 2002/0160412 to Bawendi et al. ("Bawendi"). This rejection will be discussed vis-a-vis claim 1 which now incorporates the substance of claim 21. Applicants submit the Office has failed to provide a *prima facie* case of obviousness.

In order to render claims obvious, the burden is on the Office to establish a *prima facie* case of obviousness for which three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Applicants

submit that the Office has failed to satisfy these criteria and therefore has not presented a *prima facie* case of obviousness.

In particular, claim 1 recites a method for assaying a sample for an amplification product that utilizes a probe polynucleotide present on a microsphere that comprises a spectral code. The probe polynucleotide comprises a molecular beacon that can form a stem-loop structure. None of the cited references, taken alone or together, teach or suggest such a structure in the context of the present assay. The Office concedes that neither of the primary references nor Weiss disclose the use of a spectral code in the context of semiconductor nanocrystals. Bawendi is said to “disclose the use of an encoding system, or ‘barcode’, for use with semiconductor nanocrystals.” Office Action, page 6. Although Bawendi generally states that the methods described therein can be used to encode the identity of DNA sequences, Bawendi nowhere describes the use of a barcode in the context of an assay to detect an amplification product where a molecular beacon forms a stem-loop structure as claimed. No such assay is even hinted at and certainly not enabled by Bawendi. Accordingly, there is absolutely no suggestion or motivation to modify Bawendi as asserted, there is no reasonable expectation of success, and the references do not teach or suggest all of the claim limitations.

Therefore, it appears the Office is using the teachings provided by applicants' disclosure to piece together teachings from Whitcombe, Nadeau, Weiss and Bawendi and arrive at the subject matter of the claims. This is merely a hindsight reconstruction of applicants' invention, using applicants' own disclosure as prior art. It is well established that the Office cannot use a claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. *In re Fritch* 23 U.S.P.Q.2d 1780, 1784 (Fed. Cir. 1992). See, also *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988) ("one cannot use hindsight reconstruction to pick and chose among isolated disclosures in the prior art to deprecate the claimed invention.")

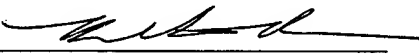
The Office Action has failed to identify the requisite teaching or motivation from the prior art to arrive at applicants' invention. Without the benefit of applicants' disclosure, there is no motivation or suggestion to one of ordinary skill in the art to combine the cited references to render the methods claimed. Thus, it is submitted that the instant grounds of rejection are improper. Reconsideration and withdrawal of the §103 rejections is respectfully requested.

**CONCLUSION**

Applicants respectfully submit that the claims are novel and non-obvious over the art, and are in full compliance with the requirements of 35 U.S.C. §112. Accordingly, allowance is believed in order, and an early notification to that effect is respectfully requested. If the Examiner has any questions that may be facilitated by a telephone conference, the Examiner is requested to contact the undersigned.

Respectfully submitted,

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